



Mojave National Preserve, California

Identifying Abandoned Materials Using Unmanned Aerial Systems

April 2-4, 2013

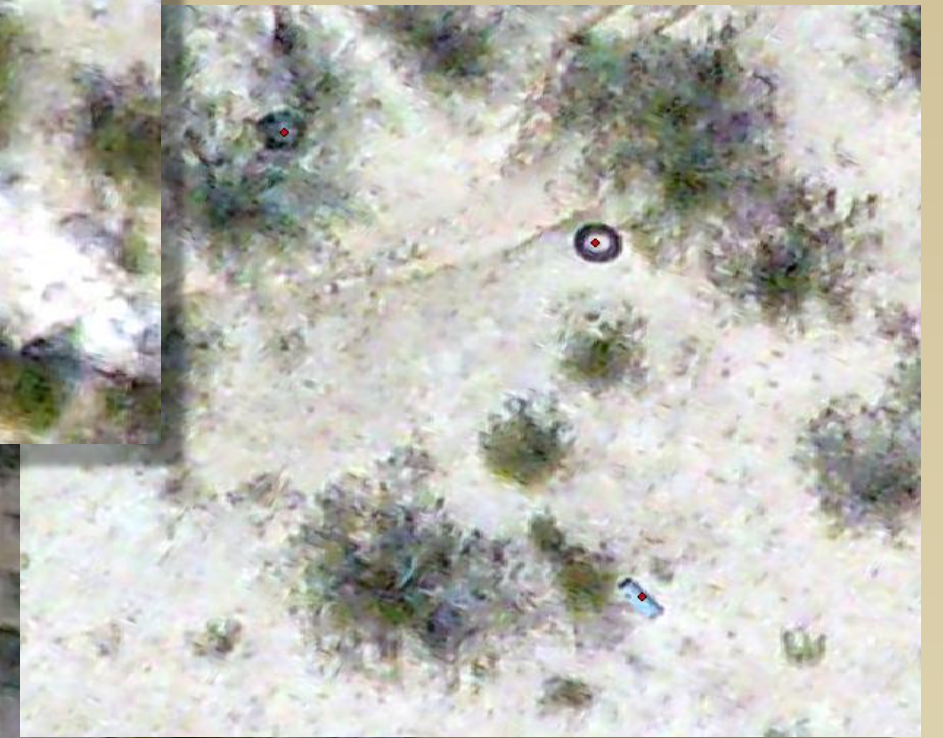
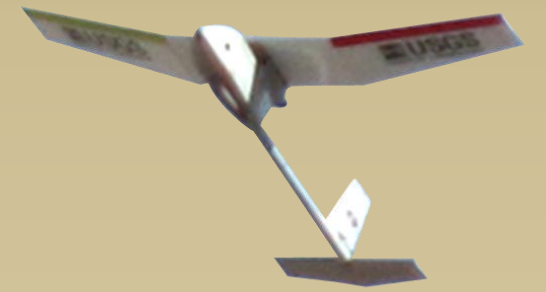


California Desert Protection Act (CDPA) of 1994 created Mojave Preserve. It is the third largest unit of the U.S. National Park System covering approximately 1.6 million acres.

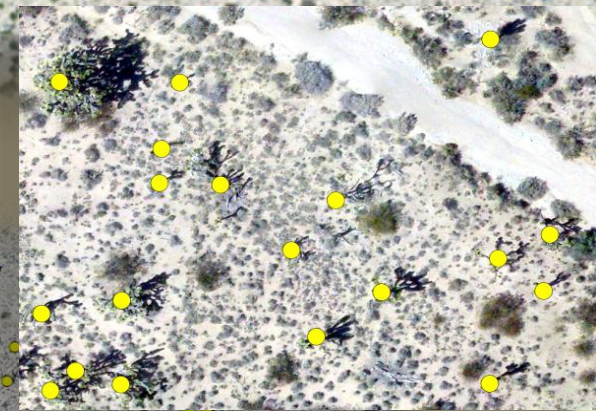
During the 1920's and 1930's homesteading in the Lanfair Valley was the primary land use. Drought and hardship during the 1930's triggered a reverse migration of homesteaders.



The pilot study prototypes the methodologies for an aerial search for abandoned materials, many of which are considered solid waste.



Above: Imagery collected by USGS Raven identifying abandoned materials for the National Preserve clean up efforts. Traditional satellite and aerial images do not have the required resolution to identify objects. The imagery has a ground sampled distance (GSD) of approximately 1.0 inch.



Above: Feature extraction of Joshua trees, indicated by yellow dots, collected via Raven UAS for vegetation surveys.

